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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/678,006
Filing Date: October 01, 2003
Appellant(s): COGLITORE ET AL.

Joseph Twaroski
For Appellant

SUPPLEMENTAL EXAMINER'S ANSWER

This is in response to the appeal brief filed 23 February 2007 (23.02.2007) appealing from the Office action mailed 26 January 2006 (26.01.2006).

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

This patent application is a continuation of an application that has resulted in the issuance of U.S. Patents 6,496,366 and 6,850,408. These patents are currently being litigated in the litigation identified below.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

This patent application is a continuation of an application that has resulted in the issuance of U.S. Patents 6,496,366 and 6,850,408. These patents are currently being litigated in the litigation identified below.

Rackable Systems, Inc. v. Super Micro Computer, Inc. (US DC NDCA), Case No. 3:05-cv-03561 -PJH.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: a new ground(s) of rejection has been set forth to provide a clear identification of all of the present claims. It appears that claim number 37 was missed in the previous office actions and examiner's answer. However, the limitations of claim 37 were taught by the prior art of record. The new grounds of rejection as set forth below is issued to comply with suggestions put forth by the Board of Patents and Appeals.

NEW GROUND(S) OF REJECTION

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4,691,274	MATOUK ET AL.	09-1987
5,971,506	DUBIN	10-1999
6,011,689	WRYCRAFT	1-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-6, 8-14, 16-22, 24-30, 32-34, 38-43, and 46-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matouk et al. (4691274) in view of Dubin (5971506). With respect to **claim 1**, Matouk et al. teaches a set of modules (41, 42, 43) comprising: at least two modules (41, 42, 43), each modules (41, 42, 43) comprising at least one heat-generating component (see for example figures 3-6 and column 2 line 58 through column 3 line 49); and a rack (12) configured for the at least two modules (41, 42, 43) to be placed in a back-to-back configuration (see for example figures1, 3, and 4), wherein air is permitted to flow through each modules (41, 42, 43) such that airflow goes through, over, or adjacent to the at least one heat-generating component (see for example figures 3-6 and column 2 line 58 through column 3 line 49), and the rack and

modules (41, 42, 43) will cooperate to direct the airflow through the modules (41, 42, 43) (1) up to exit the rack (12) through an upper section of the rack (12), (2) down to exit the rack (12) through a lower section of the rack (12), or (3) both (see for example figure 1, 3, 4). However, Matouk et al. lacks a clear teaching of the modules (41, 42, 43) being "computers" as claimed. The apparatus of Dubin is relied upon for its teaching of a rack mounted computer (10) comprising at least one heat generating component (see for example column 3 lines 14-18), wherein the computer (10) is adapted to permit air to flow therein such that airflow goes through, over, or adjacent to the at least one heat generating component (see for example column 3 lines 14-18) as claimed, see for example figures 3-5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Dubin into the apparatus of Matouk et al.; as Matouk et al. clearly teaches rack mountable electronic devices being placed in a back to back configuration, and Dubin clearly teaches rack mountable computer without placing the computer into a rack. With respect to **claim 2**, Matouk et al. in view of Dubin teaches the set of claim 1 wherein each computer (10) further comprises a chassis (140) comprising a front panel (60). With respect to **claim 3**, Matouk et al. in view of Dubin teaches the set of claim 1 wherein each computer (10) further comprises a chassis (140) comprising enclosing at least one main board (inherent). With respect to **claim 4**, Matouk et al. in view of Dubin teaches the set of claim 1 wherein the computers (10) and the rack (12) cooperate to define a space (18, 22, 26, 29, see for example figures 1, 3, 4 and column 2 lines 58-60 of Matouk et al.) between at least two back-to-back computers (10). With respect to **claim 5** Matouk et

al. in view of Dubin teaches the set of claim 3 wherein the computers (10) and the rack (12) cooperate to define a space (18, 22, 26, 29) between at least two back-to-back computers (10), see for example figures 1, 3, 4 and column 2 lines 58-60). With respect to **claim 6** Matouk et al. in view of Dubin teaches the set of claim 3 wherein the computers (10) are configured with at least one vent (64). With respect to **claim 8**, Matouk et al. in view of Dubin teaches the set of claim 6 wherein the at least one vent (64) is provided at a front section (60) of at least one of the computers (10). With respect to **claim 9**, Matouk et al. teaches a set of modules (41, 42, 43) comprising: at least two modules (41, 42, 43), each module (41, 42, 43) comprising at least one heat-generating component (see for example figures 3-6 and column 2 line 58 through column 3 line 49); and a rack (12) configured for the at least two modules (41, 42, 43) to be placed in a back-to-back configuration (see for example figures 1, 3, and 4), wherein air is permitted to flow through each module (41, 42, 43) such that airflow goes through, over, or adjacent to the at least one heat-generating component (see for example figures 3-6 and column 2 line 58 through column 3 line 49), and the rack (12) and modules (41, 42, 43) will cooperate to direct air such that the air (1) flows up to enter the rack (12) through a lower section of the rack (12), (2) flows down to enter the rack (12) through an upper section of the rack (12), or (3) both, and exits through the modules (41, 42, 43) as claimed, see for example figures 1, 3, and 4. However, Matouk et al. lacks a clear teaching of the modules (41, 42, 43) being "computers" as claimed. The apparatus of Dubin is relied upon for its teaching of a rack mounted computer (10) comprising at least one heat generating component (see for example column 3 lines 14-

18), wherein the computer (10) is adapted to permit air to flow therein such that airflow goes through, over, or adjacent to the at least one heat generating component (see for example column 3 lines 14-18) as claimed, see for example figures 3-5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Dubin into the apparatus of Matouk et al.. As Matouk et al. clearly teaches rack mountable electronic devices being placed in a back to back configuration, and Dubin clearly teaches rack mountable computer without placing the computer into a rack. With respect to **claim 10**, Matouk et al. in view of Dubin teaches the set of claim 9 wherein each computer (10) further comprises a chassis (140) comprising a front panel (60). With respect to **claim 11**, Matouk et al. in view of Dubin teaches the set of claim 9 wherein each computer (10) further comprises a chassis (140) enclosing at least one main board (inherent). With respect to **claim 12**, Matouk et al. in view of Dubin teaches the set of claim 9 wherein the computers (10) and the rack (12) cooperate to define a space (18, 22, 26, 29, see for example figures 1, 3, 4 and column 2 lines 58-60 of Matouk et al.) between at least two back-to-back computers (10). With respect to **claim 13**, Matouk et al. in view of Dubin teaches the set of claim 11 wherein the computers (10) and the rack (12) cooperate to define a space (18, 22, 26, 29, see for example figures 1, 3, 4 and column 2 lines 58-60 of Matouk et al.) between at least two back-to-back computers (10). With respect to **claim 14**, Matouk et al. in view of Dubin teaches the set of claim 11 wherein the computers (10) are configured with at least one vent (64). With respect to **claim 16**, Matouk et al. in view of Dubin teaches the set of claim 14 wherein the at least one vent (64)is provided at a front

section (60) of at least one of the computers (10). With respect to **claim 17**, Matouk et al. teaches a set of modules (41, 42, 43) comprising: a rack (12); and at least two modules (41, 42, 43), each modules (41, 42, 43) comprising at least one heat-generating component (see for example figures 3-6 and column 2 line 58 through column 3 line 49); wherein the modules (41, 42, 43) are positioned in the rack (12) in a back-to-back configuration (see for example figures1, 3, and 4), wherein air is permitted to flow through each computer such that airflow goes through, over, or adjacent to the at least one heat-generating component (see for example figures 3-6 and column 2 line 58 through column 3 line 49), and such that the rack (12) and modules (41, 42, 43) cooperate to direct the airflow that flows through the modules (41, 42, 43) (1) up to exit the rack (12) through an upper section of the rack (12), (2) down to exit the rack (12) through a lower section of the rack (12), or (3) both (see for example figure 1, 3, 4). However, Matouk et al. lacks a clear teaching of the modules (41, 42, 43) being "computers" as claimed. The apparatus of Dubin is relied upon for its teaching of a rack mounted computer (10) comprising at least one heat generating component (see for example column 3 lines 14-18), wherein the computer (10) is adapted to permit air to flow therein such that airflow goes through, over, or adjacent to the at least one heat generating component (see for example column 3 lines 14-18) as claimed, see for example figures 3-5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Dubin into the apparatus of Matouk et al.; as Matouk et al. clearly teaches rack mountable electronic devices being placed in a back to back configuration, and Dubin clearly teaches rack mountable

computer without placing the computer into a rack. With respect to **claim 18**, Matouk et al in view of Dubin teaches the set of claim 17 wherein each computer (10) further comprises a chassis (140) comprising a front panel (60). With respect to **claim 19**, Matouk et al in view of Dubin teaches the set of claim 17 wherein each computer (10) further comprises a chassis (140) enclosing at least one main board (inherent). With respect to **claim 20**, Matouk et al in view of Dubin teaches the set of claim 17 wherein the computers (10) and the rack (12) cooperate to define a space (18, 22, 26, 29, see for example figures 1, 3, 4 and column 2 lines 58-60 of Matouk et al.) between at least two back-to-back computers (10). With respect to **claim 21**, Matouk et al in view of Dubin teaches the set of claim 19 wherein the computers (10) and the rack (12) cooperate to define a space (18, 22, 26, 29, see for example figures 1, 3, 4 and column 2 lines 58-60 of Matouk et al.) between at least two back-to-back computers (10). With respect to **claim 22**, Matouk et al in view of Dubin teaches the set of claim 19 wherein the computers (10) are configured with at least one vent (64). With respect to **claim 24**, Matouk et al in view of Dubin teaches the set of claim 22 wherein the at least one vent (64) is provided at a front section (60) of at least one of the computers (10). With respect to **claim 25**, Matouk et al. teaches a set of modules (41, 42, 43) comprising: a rack (12); and at least two modules (41, 42, 43), each modules (41, 42, 43) comprising at least one heat-generating component (see for example figures 3-6 and column 2 line 58 through column 3 line 49); wherein the modules (41, 42, 43) are positioned in the rack (12) in a back-to-back configuration (see for example figures1, 3, and 4), wherein air is permitted to flow through each modules (41, 42, 43) such that airflow goes

through, over, or adjacent to the at least one heat-generating component (see for example figures 3-6 and column 2 line 58 through column 3 line 49), and such that the rack (12) and modules (41, 42, 43) cooperate to direct air (1) up to enter the rack (12) through a lower section of the rack (12), (2) down to enter the rack (12) through an upper section of the rack (12), or (3) both, and exits through the modules (41, 42, 43) (see for example figure 1, 3, 4). However, Matouk et al. lacks a clear teaching of the modules (41, 42, 43) being "computers" as claimed. The apparatus of Dubin is relied upon for its teaching of a rack mounted computer (10) comprising at least one heat generating component (see for example column 3 lines 14-18), wherein the computer (10) is adapted to permit air to flow therein such that airflow goes through, over, or adjacent to the at least one heat generating component (see for example column 3 lines 14-18) as claimed, see for example figures 3-5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Dubin into the apparatus of Matouk et al.; as Matouk et al. clearly teaches rack mountable electronic devices being placed in a back to back configuration, and Dubin clearly teaches rack mountable computer without placing the computer into a rack. With respect to **claim 26**, Matouk et al. in view of Dubin teaches the set of claim 25 wherein each computer (10) further comprises a chassis (140) comprising a front panel (60). With respect to **claim 27**, Matouk et al. in view of Dubin teaches the set of claim 25 wherein each computer (10) further comprises a chassis (140) enclosing at least one main board (inherent). With respect to **claim 28**, Matouk et al. in view of Dubin teaches the set of claim 25 wherein the computers (10) and the rack (12) cooperate to define a

space (18, 22, 26, 29, see for example figures 1, 3, 4 and column 2 lines 58-60 of Matouk et al.) between at least two back-to-back computers (10). With respect to **claim 29**, Matouk et al. in view of Dubin teaches the set of claim 27 wherein the computers (10) and the rack (12) cooperate to define a space (18, 22, 26, 29, see for example figures 1, 3, 4 and column 2 lines 58-60 of Matouk et al.) between at least two back-to-back computers (10). With respect to **claim 30**, Matouk et al. in view of Dubin teaches the set of claim 27 wherein the computers (10) are configured with at least one vent (64). With respect to **claim 32**, Matouk et al. in view of Dubin teaches the set of claim 30 wherein the at least one vent (64) is provided at a front section (60) of at least one of the computers (10). With respect to **claim 33**, the apparatus of Matouk et al. teaches the method steps of a method of cooling one or more heat-generating components (see for example figures 3-6 and column 2 line 58 through column 3 line 49) in two or more modules (41, 42, 43), where such modules (41, 42, 43) are mounted back-to-back (see for example figures 1, 3, and 4) in a rack (12), the method comprising: directing air into and through each of the modules (41, 42, 43) to cool at least one heat-generating component (see for example figures 3-6 and column 2 line 58 through column 3 line 49); and directing the air (1) up to exit the rack (12) through an upper section of the rack (12), (2) down to exit the rack (12) through a lower section of the rack (12), or (3) both as claimed, see for example figures 1, 3, and 4. However, Matouk et al. lacks a clear teaching of the method steps of the modules (41, 42, 43) being "computers" as claimed. The apparatus of Dubin is relied upon for its teaching of the method steps of a rack mounted computer (10) comprising at least one heat generating component (see for

example column 3 lines 14-18), wherein the computer (10) is adapted to permit air to flow therein such that airflow goes through, over, or adjacent to the at least one heat generating component (see for example column 3 lines 14-18) as claimed, see for example figures 3-5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Dubin into the apparatus of Matouk et al.. As Matouk et al. clearly teaches rack mountable electronic devices being placed in a back to back configuration, and Dubin clearly teaches rack mountable computer without placing the computer into a rack. With respect to **claim 34**, the apparatus of Matouk et al. in view of Dubin teaches the methods steps of the method of claim 33 further comprising the step of providing the back-to- back (see for example figures 1, 3, and 4 of Matouk et al.) computers (10) to form in cooperation with the rack (12) a space (18, 22, 26, 29, see for example figures 1, 3, 4 and column 2 lines 58-60 of Matouk et al.) between the back-to-back (see for example figures 1, 3, and 4 of Matouk et al.) computers (10). With respect to **claim 38**, the apparatus of Matouk et al. in view of Dubin teaches the methods steps of the method of claim 34 wherein the step of directing air into and through each of the computers (10) comprises providing air conditioned air to the computers (10). With respect to **claim 39**, the apparatus of Matouk et al. in view of Dubin teaches the methods steps of the method of claim 34 wherein the step of directing air into and through each of the computers (10) comprises drawing air to cool the at least one heat-generating component (see for example column 3 lines 14-18) in from the environment and exhausting the air out the rack (12) (see for example figures 3 and 4 of Matouk et al.). With respect to **claim 40**, the apparatus of

Matouk et al. in view of Dubin teaches the methods steps of the method of claim 33, wherein the one or more heat-generating components (see for example column 3 lines 14-18) are provided on one or more main boards of the computers (10), where each of the computers (10) has a front section (60) and a back section (see for example figures 3, 4, and 5 of Dubin). With respect to **claim 41**, the apparatus of Matouk et al. in view of Dubin teaches the methods steps of the method of claim 33, wherein the one or more heat-generating components (see for example column 3 lines 14-18) comprise power supplies (inherent in both Matouk et al. and Dubin). With respect to **claim 42**, the apparatus of Matouk et al. teaches the methods steps of a method of cooling one or more heat-generating components (see for example figures 3-6 and column 2 line 58 through column 3 line 49) in two or more modules (41, 42, 43), where such modules (41, 42, 43) are mounted back-to-back (see for example figures 1, 3, and 4) in a rack (12), the method comprising: directing air to cool the one or more heat-generating components (see for example figures 3-6 and column 2 line 58 through column 3 line 49) (1) up to enter the rack (12) through a lower section of the rack (12), (2) down to enter the rack (12) through an upper section of the rack (12), or (3) both (see for example figures 1, 3, and 4); and directing the air through the modules (41, 42, 43) such that the air flows through, over, or adjacent to the at least one heat-generating component (see for example figures 3-6 and column 2 line 58 through column 3 line 49) (see for example figure 1, 3, 4). However, Matouk et al. lacks a clear teaching of the method steps of the modules (41, 42, 43) being "computers" as claimed. The apparatus of Dubin is relied upon for its teaching of the method steps of a rack mounted computer

(10) comprising at least one heat generating component (see for example column 3 lines 14-18), wherein the computer (10) is adapted to permit air to flow therein such that airflow goes through, over, or adjacent to the at least one heat generating component (see for example column 3 lines 14-18) as claimed, see for example figures 3-5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Dubin into the apparatus of Matouk et al.; as Matouk et al. clearly teaches rack mountable electronic devices being placed in a back to back configuration, and Dubin clearly teaches rack mountable computer without placing the computer into a rack. With respect to **claim 43**, the apparatus of Matouk et al. in view of Dubin teaches the methods steps of the method of claim 42 further comprising the step of providing the back-to- back computers (see for example figures 1, 3, and 4 of Matouk et al.) to form in cooperation with the rack (12) a space (18, 22, 26, 29, see for example figures 1, 3, 4 and column 2 lines 58-60 of Matouk et al.) between the back-to-back computers (see for example figures 1, 3, and 4 of Matouk et al.). With respect to **claim 46**, the apparatus of Matouk et al. in view of Dubin teaches the methods steps of the method of claim 43 wherein the step of directing air (see for example figure 4 of Matouk et al.) to cool the one or more heat-generating components (see for example figures 3-6 and column 2 line 58 through column 3 line 49 of Matouk et al.) comprises providing forced air to the space (18, 22, 26, 29, see for example figures 1, 3, 4 and column 2 lines 58-60 of Matouk et al.), see for example figure 4 of Matouk et al.. With respect to **claim 47**, the apparatus of Matouk et al. in view of Dubin teaches the methods steps of the method of claim 43 wherein the step of directing air to cool the

one or more heat-generating components comprises providing air conditioned air to the space. With respect to **claim 48**, the apparatus of Matouk et al. in view of Dubin teaches the methods steps of the method of claim 43 wherein the step of directing air to cool the one or more heat-generating components comprises drawing air to cool the at least one heat-generating component in from the environment and exhausting the air out the rack. With respect to **claim 49**, the apparatus of Matouk et al. in view of Dubin teaches the methods steps of the method of claim 42, wherein the one or more heat-generating components are provided on one or more main boards of the computers, where each of the computers has a front section and a back section. With respect to **claim 50**, the apparatus of Matouk et al. in view of Dubin teaches the methods steps of the method of claim 42, wherein the one or more heat-generating components comprise power supplies. With respect to **claim 51**, Matouk et al. teaches a set of modules (41, 42, 43), comprising: at least two modules (41, 42, 43), each modules (41, 42, 43) comprising at least one heat-generating component (see for example figures 3-6 and column 2 line 58 through column 3 line 49), a rack (12) configured for the at least two modules (41, 42, 43) to be placed in a back-to-back configuration (see for example figures1, 3, and 4), wherein air is permitted to flow through each modules (41, 42, 43) such that airflow goes through, over, or adjacent to the at least one heat-generating component (see for example figures 3-6, and column 2 line 58 through column 3 line 49) such that the airflow to cool the at least one heat generating component (see for example figures 3-6, and column 2 line 58 through column 3 line 49) flows through the back-to-back modules (41, 42, 43) and the rack (12) (see for example figure 1, 3, 4).

However, Matouk et al. lacks a clear teaching of the modules (41, 42, 43) being "computers" as claimed. The apparatus of Dubin is relied upon for its teaching of a rack mounted computer (10) comprising at least one heat generating component (see for example column 3 lines 14-18), wherein the computer (10) is adapted to permit air to flow therein such that airflow goes through, over, or adjacent to the at least one heat generating component (see for example column 3 lines 14-18) as claimed, see for example figures 3-5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Dubin into the apparatus of Matouk et al.; as Matouk et al. clearly teaches rack mountable electronic devices being placed in a back to back configuration, and Dubin clearly teaches rack mountable computer without placing the computer into a rack.

Claims 7, 15, 23, 31, 35, 36, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matouk et al. (4691274) in view of Dubin (5971506) as applied to the claims above, and further in view of Wrycraft (6011689). With respect to **claim 7**, Matouk et al. in view of Dubin teaches the invention as set forth above. However, Matouk et al. in view of Dubin lacks a clear teaching of the at least on vent (64) being provided at a back section of at least one of the computers as claimed. The apparatus of Wrycraft is relied upon for its teaching of at least one vent (see for example column 3 lines 10-18. It would have bee obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Wrycraft into the apparatus of Matouk et al. in view of Dubin to aid in cooling the heat generating components. With respect to **claim 15**, Matouk et al. in view of Dubin teaches the invention as set forth

above. However, Matouk et al. in view of Dubin lacks a clear teaching of the at least on vent (64) being provided at a back section of at least one of the computers as claimed. The apparatus of Wrycraft is relied upon for its teaching of at least one vent (see for example column 3 lines 10-18. It would have bee obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Wrycraft into the apparatus of Matouk et al. in view of Dubin to aid in cooling the heat generating components. With respect to **claim 23**, Matouk et al in view of Dubin teaches the invention as set forth above. However, Matouk et al. in view of Dubin lacks a clear teaching of the at least on vent (64) being provided at a back section of at least one of the computers as claimed. The apparatus of Wrycraft is relied upon for its teaching of at least one vent (see for example column 3 lines 10-18. It would have bee obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Wrycraft into the apparatus of Matouk et al. in view of Dubin to aid in cooling the heat generating components. With respect to **claim 31**, Matouk et al. in view of Dubin teaches the set of claim 30 as set forth above. However, Matouk et al. in view of Dubin lacks a clear teaching of the at least on vent (64) being provided at a back section of at least one of the computers as claimed. The apparatus of Wrycraft is relied upon for its teaching of at least one vent (see for example column 3 lines 10-18. It would have bee obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Wrycraft into the apparatus of Matouk et al. in view of Dubin to aid in cooling the heat generating components. With respect to **claim 35**, the apparatus of Matouk et al. in view of Dubin teaches the methods steps of the

method of claim 34, see the above rejection thereof. However, both Matouk et al. and Dubin are silent on the use of fans as claimed. The apparatus of Wrycraft is relied upon for its teaching of the method steps of providing fans (36, 38, 76, 78) in computers (12) as claimed, see for example figures 1-9. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the fans of Wrycraft into the apparatus of Matouk et al. in view of Dubin to aid in cooling the heat generating components. The apparatus of Matouk et al in view of Dubin further in view of Wrycraft teaches the method steps of the fans (36, 38, 76, 78 of Wrycraft) being adapted to draw air from the computers (10 of Dubin) into the space (18, 22, 26, 29, see for example figures 1, 3, 4, and column 2 lines 58-60 of Matouk et al.) between the computers (10 of Dubin). With respect to **claim 36**, the apparatus of Matouk et al. in view of Dubin further in view of Wrycraft teaches the methods steps of the method of claim 35 further comprising the step of providing fans (36, 38, 76, 78 of Wrycraft) in the computers (10 of Dubin), the fans (36, 38, 76, 78 of Wrycraft) being adapted to pass air through, over, or adjacent to the at least one heat-generating component and into the space (18, 22, 26, 29, see for example figures 1, 3, 4, and column 2 lines 58-60 of Matouk et al.) between the computers (10 of Dubin). With respect to **claim 37**, the apparatus of Matouk et al. in view of Dubin teaches the methods steps of the method of claim 34, see the above rejection thereof. However, both Matouk et al. and Dubin are silent on the steps of directing air into and through each of the computers in such a way as to provide forced air thereto as claimed. The apparatus of Wrycraft is relied upon for its teaching of the method steps of providing fans (36, 38, 76, 78) in computers (12) as

claimed, see for example figures 1-9. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the fans of Wrycraft into the apparatus of Matouk et al. in view of Dubin to aid in cooling the heat generating components. The apparatus of Matouk et al in view of Dubin further in view of Wrycraft teaches the method steps of directing air (inherent in the vents 52, 54 and vane assemblies 65, 66 and the vent-vane system of 94, 96 of Wrycraft) into and through each of the computers (10 of Dubin) comprises providing forced air (inherent in the fans 36, 38, 76, 78 of Wrycraft) to the computers (10 of Dubin). With respect to **claim 44**, the apparatus of Matouk et al. in view of Dubin teaches the methods steps of the method of claim 43, see the above rejection thereof. However, both Matouk et al. and Dubin are silent on the use of fans as claimed. The apparatus of Wrycraft is relied upon for its teaching of the method steps of providing fans (36, 38, 76, 78) in computers (12) as claimed, see for example figures 1-9. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the fans of Wrycraft into the apparatus of Matouk et al. in view of Dubin to aid in cooling the heat generating components. The apparatus of Matouk et al. in view of Dubin further in view of Wrycraft teaches the method steps of the fans (76, 78 of Wrycraft) being adapted to draw air from the space (18, 22, 26, 29, see for example figures 1, 3, 4, and column 2 lines 58-60 of Matouk et al.) between the computers (10 of Dubin) to cool the at least one heat-generating component (see for example figures 3-6 and column 2 line 58 through column 3 line 49 of Matouk et al.). With respect to **claim 45**, the apparatus of Matouk et al. in view of Dubin further in view of Wrycraft teaches the methods steps of

the method of claim 44 further comprising the step of providing fans (36, 38, 76, 78 of Wrycraft) in the computers (10 of Dubin), the fans (36, 38, 76, 78 of Wrycraft) being adapted to pass air from the space (18, 22, 26, 29, see for example figures 1, 3, 4, and column 2 lines 58-60 of Matouk et al.) between the computers (10 of Dubin) and through, over, or adjacent to the at least one heat-generating component(see for example figures 3-6 and column 2 line 58 through column 3 line 49 of Matouk et al.).

(10) Response to Argument

With respect to applicant's arguments dated 02/23/2007, the examiner of record respectfully disagrees. Applicant asserts that (1.) neither Matouk et al. nor Dubin discloses or suggests providing computers in a back-to-back configuration in the modular power supply "framework" of Matouk et al., (a.) neither Matouk nor Dubin teach or suggest placing a computer in a back-to-back modular power supply framework, (b.) one of ordinary skill would not have been motivated to dispose rack mountable computers in Matouk's "framework", and (c.) Dubin does not disclose or suggest relocating these connectors to a front of a computer chassis, such that one of ordinary skill would have been motivated to use those chassis in Matouk's "framework"; (2.) the Proffered Motivation to Combine and Modify Matouk and Dubin is Insufficient; and (3.) Matouk in view of Dubin does not teach or suggest the claimed arrangement permitting air to flow through each computer such that airflow goes through, over, or adjacent to the at least one heat-generating component and wherein the rack and computers cooperate to direct airflow through the computers up, down, or both to enter (claims 9, 25) or exit (claims 1, 17) the rack and (i) it is the Examiner's burden to show a teaching

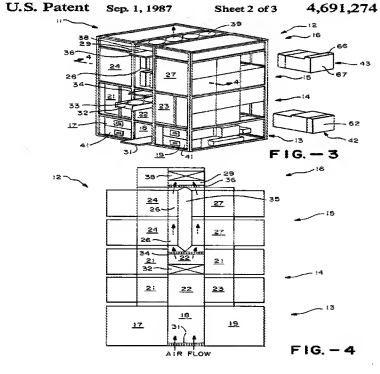
or suggestion, either explicit or inherent, of all the limitations of the claim. Applicant also asserts that Wrycraft does not cure the deficiencies of Matouk et al. in view of Dubin as alleged above.

With respect to applicant's assertion that neither Matouk et al. nor Dubin discloses or suggests providing and/or placing computers in a back-to-back configuration as argued. The examiner for record never alleged that Matouk et al. or Dubin solely discloses or suggests providing and/or placing "computers" in a back-to-back configuration. To the contrary, the examiner of record freely admits that Matouk et al. lacks a teaching of the modules (41, 42, 43) being computers as claimed, see the above 103 rejection thereof. However, the examiner of record relies upon the teachings of Dubin, which provides the rack mountable computer that Matouk et al. lacks. It is noted that the examiner of record believes the combined teachings of Matouk et al. and Dubin discloses applicant's claimed invention, in as much as Matouk et al. clearly teaches interchangeable electrical equipment being place in a back-to-back configuration in a framework (rack) and Dubin teachings a rack mountable computer, however lacking a clear teaching of the rack to which the rack mountable computer are placed. Dubin does, however, suggest an environment in which his invention is to be used. In the background section, column 1 lines 17-21, Dubin suggest using the computers in a laboratory and repair shops where electrical equipment is often mounted in racks. Dubin goes on to state that computers are not readily insertable in electrical equipment racks as a problem in the art. It is this very problem, which the invention of Dubin overcomes. Dubin clearly suggest that his rack mountable computer is to be

mounted in an electrical equipment rack when it becomes necessary to use a computer in conjunction with other components typically mounted in racks. Matouk et al. clearly teaches a framework (rack) with electrical equipment mounted thereon and being used in conjunction with computers. It is this very knowledge, which would provide one of ordinary skill in the art the proper motivation or suggestion to combine the teachings of Dubin with the teachings of Matouk et al. as both teach the use of rack mountable devices in conjunction with computers and a rack.

With respect to applicant's assertion that one of ordinary skill would not have been motivated to dispose rack mountable computers in Matouk's "framework". It is noted that the examiner of record has afforded the broadest, reasonable interpretation to applicant's "rack" and Matouk et al.'s "framework". Rack is defined as a ***framework*** or stand in or on which to hold, hang, or display various articles (see The America Heritage College Dictionary, fourth edition). Framework is defined as a structure for supporting or enclosing something else, especially the skeletal support of a physical construction (see The America Heritage College Dictionary, fourth edition). Understanding the above definitions of both rack and framework and the ordinary skill in the art, one would find motivation to combine the rack mountable computers of Dubin into the framework (rack) of Matouk et al. simply to provide a support structure for the rack mountable computers which Dubin fails to teach. The teaching of a back-to-back configuration, as clearly taught by Matouk et al., would be advantageous in the electrical equipment environment, where a plurality of electrical equipment is supported in mass quantities or in conjunction with one another. Applicant alleges that even if the rack-

mountable computers of Dubin were combined with Matouk's et al. modular power supply framework, the combination would require substantial untaught modification, and would still not include all of the limitations of the applicant's pending claims. It is noted that the examiner of record has afforded the broadest, reasonable interpretation to the applicant's "rack" and Matouk et al.'s "framework". Applicant also asserts that Matouk et al. teaches a "custom framework". Applicant relies upon figure 3 (see below), and column 3 lines 45-47, 65-66, and column 4 lines 9-12.

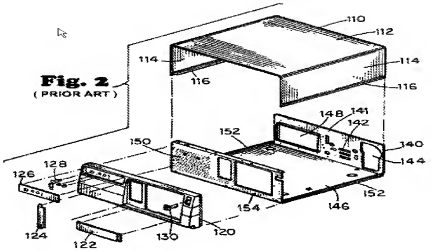


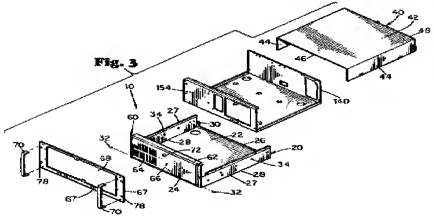
The examiner of record respectfully disagrees with applicant's assertion of a custom framework. It appears that applicant has omitted Matouk et al.'s teaching of the

framework (rack) being formed in such a manner so that four sections (13, 14, 15, and 16) are provided where each section has two side compartments (17, 19, 21, 23, 24, 27 respectfully) with an intermediate compartments (18, 22, 26, 29 respectfully) there between (see for example figure 4 above and column 2 lines 40-57). Matouk et al. also teaches a plurality of electrical equipment being places in side compartments (21, 23, 24, 27). It is this very back-to-back teaching one of ordinary skill in the art would recognize as motivation, coupled with the fact that Dubin teaches his computer being mounted in a laboratory or repair shop electrical equipment rack. The fact that Matouk et al. places a plurality of specific modules in specific location of the rack would not hinder one of ordinary skill in the art to view that attributes of the rack itself. Those attributes are, a rack being configured to support electrical equipment in a back-to-back configuration and providing cooling means. Specifically since Matouk et al. teach sliding removable and interchangeable electrical equipment, one of ordinary skill in the art would also note such relocation or exchange of electrical equipment as routine. It is unclear, what "extensive modification" applicant is suggesting.

With respect to applicant's assertion that Dubin does not disclose or suggest relocating connectors to a front of a computer chassis, such that one of ordinary skill would have been motivated to use the chassis in Matouk's "framework". It appears, to the examiner of record, that applicant is arguing limitations not claimed. Applicant states that Matouk et al. "envisions" that its invention can be connected to a computer via an input/output module (41), which can be used to power the computer. It appears that applicant has omitted Matouk et al.'s teaching of the input/output module (41) being

used to provide DC power to supply the fans (see column 3 lines 49-64). However, Matouk et al. lacks a clear teaching of the "wires" needed to "connect" the input/output module (41) and fans. One of ordinary skill in the art would recognize Matouk et al.'s lacks of description as well known and routine in the art. One of ordinary skill would have the ability to place "wires" in an electrical equipment rack as needed and necessary. Such placement of wires would in no way be considered out side of the skill in the art or unsubstantiated. To the contrary, one would view wire placement as merely routine and necessary. It appears that applicant is relying upon the prior art (figure 2, see below), which Dubin cites as an example of the deficiencies in converting a standard computer into a rack mountable computer.





Applicant is directed to Dubin's figure 3 (see above). Dubin teaches modifying the prior art computer of figure 2 (see above) by removing the cover and faceplates of the prior art computer to provide easy accessibility to the inside of the computer. The modifications, in which Dubin envisioned, are represented by figure 3. One of ordinary skill would not confuse figures 2 and 3 of Dubin. There is no suggestion that the invention of Dubin would exclude the openings, which applicant relies upon as connector, nor that the connectors or wires of Dubin would not be accessible. Dubin further teaches that the computer is to be modified in such a way as to be slid into and

out of a rack, which inherently provides one of ordinary skill in the art access to the connectors and components contained within the computer and thus the rack.

Applicant's asserts that the proffered motivation to combine and modify Matouk and Dubin is insufficient. It appears applicant is arguing the connections between the input/output module of Matouk et al. and the connectors shown in prior art reference of Dubin. It is noted that the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. In this case, Matouk et al. clearly teaches interchangeable electrical equipment being place in a back-to-back configuration in a framework (rack) and Dubin clearly teachings a rack mountable computer, however Dubin lacks a clear teaching of the rack to which the rack mountable computer are placed. Dubin does, however, suggest an environment in which his invention is to be used. In the background section, column 1 lines 17-21, Dubin suggest using the computers in a laboratory and repair shops where electrical equipment is often mounted in racks. Dubin goes on to state that computers are not readily insertable in electrical equipment racks as a problem in the art. It is this very problem, which the invention of Dubin overcomes. Dubin clearly suggest that his rack mountable computer is to be mounted in an electrical equipment rack when it becomes necessary to use a computer in conjunction with other components typically mounted in racks. Matouk et al. clearly teaches a framework (rack) with electrical equipment mounted thereon and being used

in conjunction with computers. Also, Dubin teaches modifying the prior art computer of figure 2 (see above) by removing the cover and faceplates of the prior art computer to provide easy accessibility to the inside of the computer. The modifications, in which Dubin envisioned, are represented by figure 3 (see above). One of ordinary skill would not confuse figures 2 and 3 (see above respectfully) of Dubin. There is no suggestion that the invention of Dubin would exclude the openings, which applicant relies upon as connector, as depicted in figure 2 (see above), nor that the connectors or wires of Dubin would not be accessible. Dubin further teaches the computer being modified in such a way as to be slid into and out of a rack, which inherently provides one of ordinary skill in the art access to the connectors and components contained within the computer and thus the rack.

With respect to applicant's assertions that Matouk in view of Dubin does not teach or suggest the claimed arrangement permitting air to flow through each computer such that airflow goes through, over, or adjacent to the at least one heat-generating component and wherein the rack and computers cooperate to direct airflow through the computers up, down, or both to enter (claims 9, 25) or exit (claims 1, 17) the rack and (i) it is the Examiner's burden to show a teaching or suggestion, either explicit or inherent, of all the limitations of the claim(s). Applicant also asserts that Wrycraft does not cure the deficiencies of Matouk et al. in view of Dubin as alleged above. Matouk et al. teaches electrical equipment (41, 42, 43) being disposed in a framework (rack), which

provides means to cool the electrical equipment (41, 42, 43), see figure 4 below.

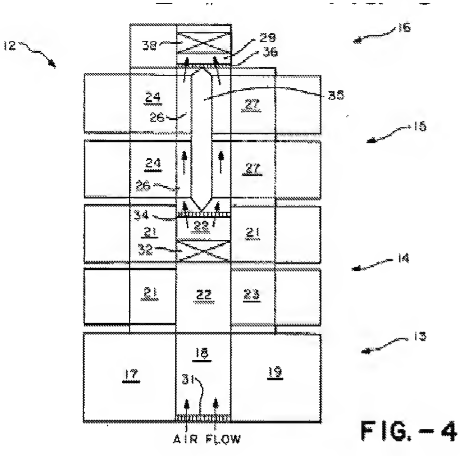


FIG. – 4

Applicant claims an arrangement permitting air to flow through each computer such that airflow goes through, over, or adjacent to the at least one heat-generating component and wherein the rack and computers cooperate to direct airflow through the computers up, down, or both to enter (claims 9, 25) or exit (claims 1, 17). It appears that applicant is arguing the teachings of Matouk et al. in view of Dubin separately. Matouk et al. discloses an arrangement permitting air to flow adjacent the at least one heat-generating components (41, 42, 43) via the heat sinks, which extends into the intermediate compartments (18, 22, 26, 29 respectfully) space between two side

compartments (17, 19, 21, 23, 24, 27 respectfully). Dubin teaches a computer with vents which permits air to pass through, over, or adjacent the at least one heat-generating components. It is the combination of Matouk et al. in view of Dubin, which the examiner of record relies upon for a teaching of an arrangement permitting air to flow through each computer such that airflow goes through, over, or adjacent to the at least one heat-generating component and wherein the rack and computers cooperate to direct airflow through the computers up, down, or both to enter (claims 9, 25) or exit (claims 1, 17) as claimed.

With respect to applicant's remarks concerning the examiner's burden to show a teaching or suggestion, either explicit or inherent, of all the limitations of the claim. It is the position of the examiner of record that a proper prima facie case of obviousness has been established. The examiner of record has never attempted to shift the burden of proof to the applicant. The examiner of record merely attempted to restate the position in a way that might clear applicant's confusion. The examiner of record attempted to make applicant understand that neither Matouk et al. nor Dubin teach or suggest hermetically sealed or air tight equipment. One of ordinary skill in the art would understand that if a device is not hermetically sealed or air tight, than air would be permitted to flow through, over, or adjacent to the device.

Finally, applicant also asserts that Wrycraft does not cure the deficiencies of Matouk et al. in view of Dubin as alleged. It is the position of the examiner of record that Wrycraft is relied upon for the teaching of a plurality of vents located on the back

section of a computer and fans being placed inside of a computer to aid in cooling as claimed.

In conclusion, it is the position of the examiner of record that claims 1-51 are not allowable over the prior art of record, given the foregone remarks.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section **(6)** above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR

41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

//Lisa Lea-Edmonds//

Primary Examiner, Art Unit 2835

Conferees:

/Darren Schuberg/

TQAS TC 2800

Jayprakash Gandhi

/Jayprakash N Gandhi/

Supervisory Patent Examiner, Art Unit 2835

A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:

/John W. Cabeca/

John W. Cabeca

Director, Technology Center 2800